MSA	CLEC Networks – 1998	CLEC Networks – 2001
117. Modesto, CA	Not Available	Not Available
118. Flint, MI	Ovation Communications **CLECs: 1** **Operational Networks: 1**	MichTel **CLECs: 1** **Operational Networks: 2**
119. Jackson, MS	e.spire; Hyperion Telecommunications; Intermedia; ITC DeltaCom; *Net-Tel Corporation*; WorldCom **CLECs: 6** **Operational Networks: 5** **Off-Net Networks: 1**	Adelphia Business Solutions; AT&T; e.spire; Intermedia; ITC^DeltaCom; Network Telephone; NewSouth Communications; WorldCom; Xspedius **CLECs: 9** **Operational Networks: 9**
120. Fort Myers-Cape Coral, FL	Intermedia; KMC Telecom **CLECs: 2** **Operational Networks: 2**	Intermedia; ITC^DeltaCom; KMC Telecom; NewSouth Communications; US LEC **CLECs: 5** **Operational Networks: 5**
121. Spokane, WA	Convergent Communications; Electric Lightwave; GST Telecommunications; NEXTLINK Communications (XO); *WinStar* **CLECs: 5** **Operational Networks: 4** **Off-Net Networks: 1**	*AT&T*; *McLeodUSA*; XO **CLECs: 3** **Operational Networks: 3** **On-Net Networks: 2**
122. Madison, WI	Bresnan Communications; Dakota Services; KMC Telecom; TDS MetroCom; US Xchange **CLECs: 5** **Operational Networks: 5**	AT&T; Choice One Communications; KMC Telecom; McLeodUSA; TDS Metrocom **CLECs: 5** **Operational Networks: 6**
123. Pensacola, FL	Intermedia; KMC Telecom **CLECs: 2** **Operational Networks: 2**	Cox Communications; Intermedia; ITC^DeltaCom; KMC Telecom; Madison River Communications; Network Telephone; NewSouth Communications **CLECs: 7** **Operational Networks: 7**
124. Boise City, ID	Electric Lightwave; GST Telecommunications; *Net-Tel Corporation*; *WinStar* **CLECs: 4** **Operational Networks: 2** **Off-Net Networks: 2**	McLeodUSA; Pac-West Telecomm **CLECs: 2** **Operational Networks: 2**
125. Santa Barbara-Santa Maria-Lompoc	Cox Communications; GST Telecommunications **CLECs: 2** **Operational Networks: 2**	Cox Communications; ICG Communications **CLECs: 2** **Operational Networks: 2**
126. Canton-Massillon, OH	Not Available	Not Available
127. Saginaw-Bay City-Midland, MI	Bresnan Communications; Ovation Communications **CLECs: 2** **Operational Networks: 4**	
128. Salinas, CA	Pac West Telecomm **CLECs: 1** **Operational Networks: 1**	Pac-West Telecomm **CLECs: 1** **Operational Networks: 1**
129. Corpus Christi, TX	CapRock Communications; e.spire; ICG Communications; KMC Telecom; *Net-Tel Corporation*; NEXTLINK Communications (XO); WorldCom **CLECs: 7** **Operational Networks: 6** **Off-Net Networks: 1**	*Birch Telecom*; e.spire; ICG Communications; KMC Telecom; Logix Communications **CLECs: 5** **Operational Networks: 5** **On-Net Networks: 1**

MSA	CLEC Networks – 1998	CLEC Networks – 2001
130. Beaumont-Port Arthur, TX	CapRock Communications **CLECs: 1** **Operational Networks: 1**	*Birch Telecom*; *Ionex Telecommunications*; *ITC^DeltaCom* **CLECs: 3** **Operational Networks: 1** **On-Net Networks: 3**
131. Newburgh, NY-PA	Not Available	Not Available
132. York, PA	CTSI; Hyperion Telecommunications **CLECs: 2** **Operational Networks: 2**	Adelphia Business Solutions; CTSI **CLECs: 2** **Operational Networks: 2**
133. Shreveport-Bossier City, LA	e.spire; Hyperion Telecommunications; Intermedia; KM Telecom **CLECs: 4** **Operational Networks: 4**	Adelphia Business Solutions; CenturyTel; e.spire; Intermedia; ITC^DeltaCom; KMC Telecom; Network Telephone; Xspedius **CLECs: 8** **Operational Networks: 8**
134. Lafayette, LA	American MetroComm; Hyperion Telecommunications **CLECs: 2** **Operational Networks: 2**	Adelphia Business Solutions; ITC^DeltaCom; Network Telephone; NewSouth Communications; Xspedius **CLECs: 5** **Operational Networks: 6**
135. Lawrence, MA-NH	AT&T; NorthEast Optic Network Services; *RNK*; Vitts **CLECs: 4** **Operational Networks: 3** **Off-Net Networks: 1**	Intermedia **CLECs: 1** **Operational Networks: 1**
136. Visalia-Tulare-Porterville, CA	Not Available	Not Available
137. Reading, PA	CTSI; Hyperion Telecommunications; NEXTLINK Communications (XO) **CLECs: 3** **Operational Networks: 3**	Adelphia Business Solutions; CEI Networks; CTSI; XO **CLECs: 4** **Operational Networks: 4**
138. Davenport-Moline-Rock Island, IA-IL	McLeodUSA; *Net-Tel Corporation* **CLECs: 2** **Operational Networks: 1** **Off-Net Networks: 1**	AT&T; McLeodUSA **CLECs: 2** **Operational Networks: 2**
139. Rockford, IL	Dakota Services; US Xchange **CLECs: 2** **Operational Networks: 2**	Choice One Communications; TDS Metrocom **CLECs: 2** **Operational Networks: 2**
140. Provo-Orem, UT	Electric Lightwave; *Net-Tel Corporation*; NEXTLINK Communications (XO); WorldCom **CLECs: 4** **Operational Networks: 4** **Off-Net Networks: 1**	*McLeodUSA*; XO **CLECs: 2** **Operational Networks: 1** **On-Net Networks: 1**
141. Appleton-Oshkosh-Neenah, WI	Dakota Services; TDS MetroCom; US Xchange **CLECs: 3** **Operational Networks: 4**	Choice One Communications; TDS Metrocom; *McLeodUSA* **CLECs: 3** **Operational Networks: 6** **On-Net Networks: 2**
142. Biloxi-Gulfport-Pascagoula, MS	American MetroCom; ITC DeltaCom **CLECs: 2** **Operational Networks: 3**	ITC^DeltaCom; Madison River Communications; Network Telephone; *NewSouth Communications* **CLECs: 4** **Operational Networks: 4** **On-Net Networks: 1**

MSA	CLEC Networks – 1998	CLEC Networks – 2001
143. Peoria-Pekin, IL	McLeodUSA **CLECs: 1** **Operational Networks: 4**	Madison River Communications; *McLeodUSA* **CLECs: 2** **Operational Networks: 5** **On-Net Networks: 4**
144. Huntsville, AL	Intermedia; ITC DeltaCom; KMC Telecom; Knology Holdings **CLECs: 4** **Operational Networks: 4**	Intermedia; ITC^DeltaCom; KMC Telecom; *Knology Broadband*; Network Telephone; NewSouth Communications; *US LEC* **CLECs: 7** **Operational Networks: 9** **On-Net Networks: 3**
145. Salem, OR		Advanced TelCom Group; AT&T; *Eschelon Telecom*; Integra Telecom; *McLeodUSA* **CLECs: 5** **Operational Networks: 7** **On-Net Networks: 2**
146. Atlantic-Cape May, NJ	Conectiv Communications **CLECs: 1** **Operational Networks: 1**	AT&T **CLECs: 1** **Operational Networks: 1**
147. Trenton, NJ	AT&T; Conectiv Communications; *Net-Tel Corporation*; WorldCom **CLECs: 4** **Operational Networks: 5** **Off-Net Networks: 1**	AT&T **CLECs: 1** **Operational Networks: 1**
148. Hamilton-Middletown, OH		Intermedia **CLECs: 1** **Operational Networks: 1**
149. Stamford-Norwalk, CT	Cablevision Lightpath; Net-Tel Corporation; NorthEast Optic Network Services; *RNK*; WinStar; WorldCom **CLECs: 6** **Operational Networks: 7** **Off-Net Networks: 1**	AT&T; *Cablevision Lightpath*; Intellispace; PaeTec; WorldCom **CLECs: 5** **Operational Networks: 6** **On-Net Networks: 2**
150. Reno, NV	Net-Tel; WorldCom **CLECs: 2** **Operational Networks: 2**	WorldCom **CLECs: 1** **Operational Networks: 1**

Sources: NPRG CLEC Report 2002, 15th ed.; NPRG CLEC Report 1999, 10th ed.

APPENDIX L.
ESTIMATING CLEC SPECIAL ACCESS MARKET SHARE

According to the FCC's most recent *Telecommunications Industry Revenues* report, the Bell companies earned $13.3 billion in the provision of "local private line and special access" and "long distance private line services" in 2000.[1] Special access revenues are the sum of these two revenue categories.[2]

The problem with using the FCC's revenue data to estimate CLEC special access revenues is that several CLECs – including the two largest, AT&T and WorldCom – report their special revenues as both CLECs and "toll carriers."[3] For example, when AT&T and WorldCom use their local facilities to supply special access to their long distance network, they typically report that revenue as toll carriers.[4] Not all of the local and long distance private line revenue that these carriers report as toll carriers is necessarily special access revenue, however, and there is no precise way to back out the portion that is.

Rather than engage in guesswork, we have relied on an alternative source for CLEC special access revenue. According to New Paradigm Resource Group's *CLEC Report 2002* (15th ed. 2002), CLECs earned $8.4 billion from the provision of special access/private line services in 2000.[5] Using the New Paradigm figure for CLEC special access revenues and the FCC figure for BOC special access revenues yields a CLEC market share of approximately 39 percent in 2000.

Even using FCC data, however, yields a very high market share. According to the most recent *Telecommunications Industry Revenues* report, CLECs earned $4.1 billion in the provision of local private line and special access and long distance private line services in 2000.[6] In addition, toll carriers reported $100 million in local private line revenues.[7] AT&T also has

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[1] *FCC Telecommunications Industry Revenues, 2002 ed.* at 13 (Table 5, Lines 305 & 312), 17 (Table 6, Lines 406 & 415).

[2] The FCC defines "long distance private line services" to "include revenues from dedicated circuits, private switching arrangements, and/or predefined transmission paths, extending beyond the basic service area. *This category should include revenues from the resale of special access services.*" FCC, *Telecommunications Reporting Worksheet, FCC Form 499-A, Instructions for Completing the Worksheet for Filing Contributions to Telecommunications Relay Service, Universal Service, Number Administration, and Local Number Portability Support Mechanisms*, at 18 (Feb. 2001) (emphasis added). AT&T has acknowledged that special access revenues represent the sum of these two categories. *See* Declaration of C. Michael Pfau on Behalf of AT&T Corp. ¶¶ 13-14, *attached to* Reply Comments of AT&T Corp., *Implementation of Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98 (FCC filed Apr. 30, 2001) ("Pfau Decl.").

[3] *See id.* ¶ 16 ("Arguably, MCI/WorldCom and AT&T fall within the category of 'Toll Carrier' and, as a result, any self-supplied special access may not be included in the CLEC figure.").

[4] *See id.* ¶ 17 ("self-supplied access would not be encompassed in the figures and, hence, the need for an adjustment").

[5] *NPRG CLEC Report 2002, 15th ed.*, Ch. 3 at Table 10.

[6] *FCC Telecommunications Industry Revenues, 2002 ed.* at 14 (Table 5, Lines 305 & 312), 18 (Table 6, Lines 406 & 415).

[7] *FCC Telecommunications Industry Revenues, 2002 ed.* at 16 (Table 5, Line 305), 19 (Table 6, Line 406).

acknowledged that the access that AT&T and WorldCom supply to themselves was worth approximately $900 million as of 1999.[8] Assuming that the value of these two carriers' self-supplied special access increased in 2000 by the same amount as it did between 1998 and 1999, the value of this self-supply was approximately $1.1 billion in 2001.[9] That brings total CLEC special access revenues to $5.3 billion under FCC data. This represents a market share of 28 percent.

This figure is undoubtedly too low, however. First, it fails to account for self-supply by long distance carriers other than AT&T and WorldCom, even though many such carriers have local access facilities of their own, and can reasonably be expected to use these facilities to self-provide access to some extent. Second, it excludes completely any special access revenue that AT&T and other interexchange carriers report as long distance private line revenue and that is earned by reselling the services of other CLECs and ILECs. This amount is substantial, as the interexchange carriers are the largest special access customers of both many CLECs and the ILECs, and purchase such services in order to resell them to end users.[10]

Finally, CLECs' share of the special access market was likely even higher in 2001 than it was in 2000. For example, according to the FCC's most recent *Local Telephone Competition* report, CLECs' share of large business lines increased from 17.5 percent to 19.1 percent from December 2000 to June 2001.[11] New Paradigm reports that CLEC special access revenue grew by more than 20 percent between 2000 and 2001.[12]

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[8] Pfau Decl. ¶ 16.

[9] Pfau Decl. ¶ 16 (value of AT&T and WorldCom self-supply increased from $627 million in 1998 to $856 million in 1999).

[10] AT&T has acknowledged that adding this total to CLEC local access and private line revenue would bring total special access revenues in line with the totals reported by New Paradigm. *See* Pfau Decl. ¶ 19 n.4. AT&T has nonetheless argued that it is appropriate to exclude such revenues, but neither of its explanations provides an adequate justification for its approach. First, AT&T has claimed that CLEC/IXC long distance private line revenues should not be counted because the ILECs do not typically compete in the provision of long distance private line service. But the extent to which ILECs provide long distance private service obviously is irrelevant; the only relevant question is the extent to which competing carriers provide private line and special access services that compete with the private line and special access service that ILECs provide. Second, AT&T has claimed that including in the market share calculation the toll carrier special access revenues reported as long distance private line would lead to double counting because ILEC wholesale revenues are included as a cost for Toll Carrier services and reflected in their end user revenues. But including the revenue that competing carriers earn from leasing a CLECs' or ILECs' facilities or reselling their service is not necessarily double counting, because the competing carrier invariably marks up its own retail service to end users over and above the wholesale price. In addition, CLECs often will supplement the services they resell with one or more value-added services to distinguish themselves. In any event, even assuming that there would be some double counting, this is hardly an argument for excluding this entirely as CLEC revenue. Such revenue clearly is CLEC revenue, even if it is earned from customers that are not served entirely over the CLEC's own facilities.

[11] *FCC Local Competition Report, Feb. 2002 ed.* at Table 2.

[12] *NPRG CLEC Report 2002, 15th ed.*, Ch. 3 at Table 11.

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I. OVERVIEW

Tables

Table 1. Competitive Networks
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<u>**Figures**</u>

Figure 2. Decline of BOC Access Lines
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Figure 3. CLEC Access Line Distribution
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Figure 7. CLEC Revenues
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Figure 8. CLEC Revenue Distribution
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Figure 9. Wireless and Data Overtaking Voice
JP Morgan Telecom Services 2001 Report at Table 1.

Figure 10. Wireless vs. Wireline Growth
Access Lines. *JP Morgan Telecom Services 2001 Report* at Tables 19 & 23. ***Revenues.*** *JP Morgan Telecom Services 2001 Report* at Tables 1 & 19.

II. SWITCHING

<u>**Tables**</u>

Table 1. Competition for ILEC Circuit-Switched Local Traffic
CLEC Circuit Switches. Switches: *January 2002 LERG.* ***Revenues:*** *CSFB 3Q01 CLEC Vital Signs Review* at Exh. 9. ***Wireless. Switches:*** *January 2002 LERG.* ***Subscribers/Lines:*** CTIA, *CTIA's World of Wireless Communications*, http://www.wow-com.com/index.cfm. ***Minutes:*** C.F. Carvalho, Morgan Stanley, Dean Witter, Investext Rpt. No. 8285600, Telecom – Wireless Services: Industry Outlook: Life After 50 – Industry Report at *4 (Nov. 28, 2001); CTIA, *CTIA's World of Wireless Communications*, http://www.wow-com.com; *JP Morgan Telecom Services 2001 Report* at Table 31. ***Revenues:*** *CTIA's Semi-Annual Wireless Industry Survey Results.* ***Data. Switches:*** *NPRG CLEC Report 2002, 15th ed.* at Ch. 4, Table 18 (This is a highly conservative estimate. It does not include the 840 packet switches NPRG lists for competitive Independent Operating Companies, utility CLECs, data providers, or Gig-E providers. In addition, it does not include the 7,000 packet switches that NPRG lists for AT&T as of year-end 2001. According to NPRG's prior reports, AT&T had only 50 packet switches as of year-end 2000. Because one-year growth of this magnitude is unlikely, in an abundance of caution we have used the 2000 figure for AT&T's packet switches). ***Subscribers/Lines:*** *Morgan Stanley Cable Modem/xDSL Report* at Exh. 1; *EchoStar Hopes New Plan Will Boost Deal's Chances*, Communications Daily at 3 (Feb. 27, 2002); *Yankee Group Fiber and Fixed Wireless Report* at Table 6. ***Minutes:*** T. McElligott, *A Slice of Humble Pie*, Telephony (July 2, 2001); Nielsen/NetRatings Press Release, *Broadband Net Surfing Accounts for More than Half of All Time Spent Online, According to Nielsen/NetRatings* (Mar. 5, 2002). ***Revenues:*** *JP Morgan Telecom Services 2001 Report* at Figure 21; *IDC Packet Switching Report* at Figures 8-9, 30-31. ***PBX. Subscribers/Lines:*** Multimedia Telecommunications Association, *1998 Multimedia Telecommunications Market Review and Forecast* at 92 (1998); Telecommunications Industry Association, *2001 Multimedia Telecommunications Market Review and Forecast* at 105, 108 (2001). ***Minutes:*** Multimedia Telecommunications Association, *1998 Multimedia Telecommunications Market Review and Forecast* at 92 (1998); Telecommunications Industry Association, *2001 Multimedia Telecommunications Market Review and Forecast* at 105, 108 (2001); *FCC Statistics of Common Carriers 2000/2001 ed.* at Table 2.4.

Table 7. Use of CLEC Switches to Serve Large Geographic Areas
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Table 11. Average Number of CLEC Packet Switches in Top 100 MSAs
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Table 12. Selected CLEC Data Service Offerings
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<u>**Figures**</u>

Figure 1. Distribution of CLEC Switches
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Figure 6. CLEC Revenues
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Figure 7. Wireless vs. Wireline Growth
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III. TRANSPORT

<u>**Tables**</u>

Table 4. Average Number of CLEC Networks by MSA
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IV. LOOPS

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V. RESALE

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Appendix I. CLECs Providing ATM and Frame Relay

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Appendix J. Additional Information on Softswitches

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